

TESIS

MEMBANDINGKAN HASIL VO_2 MAKSIMAL ANTARA TES LARI 12 MENIT (COOPER), ERGOCYCLE (ASTRAND) DAN TREADMILL (ASTRAND)



BAYU AFRIYANTO

**PROGRAM PASCA SARJANA
UNIVERSITAS AIRLANGGA
SURABAYA**

2011

ABSTRACT

COMPARING THE RESULTS OF VO₂ MAX AMONG 12 MINUTES-RUNNING TEST (COOPER), ERGOCYCLE TEST (ASTRAND) AND TREADMILL TEST (ASTRAND)

Bayu Afriyanto

The aim of this study is to compare the result of VO₂ max test by Treadmill Test, Ergo cycle Test, 12 minutes-Running Test.

This research applied by *the factorial cross over design*. The subjects of the research are men 21-25 years old, the number of samples is 10 men, with 3 treatments, Treadmill Test, Ergo cycle Test, 12 minutes-Running Test, each treatment taking a rest 3 days for recovery of physical condition. Before doing the tests, the subjects of the research do fasting for 10 hours at night, starting at 22.00 until 08.00 o'clock in the morning. Before starting the physical activities, the men end the fasting by drinking mineral water about 200 cc and poured with sugar 50 grams. After that, the physical condition will be checked and ready to do physical activities.

The data gained from the result of the research is subsequently processed by using 2 analyses, i.e. the descriptive analysis and the inferential statistical analysis (distribution Normality test and Paired T-test) with the significant level 5%. The results provided indicate that : the average mean of VO₂max by Treadmill: 30.6 ± 2.1 ml / kg / min, meanwhile the average mean of VO₂max by Ergo cycle: 48.9 ± 13.5 ml / kg / min, and the average mean of VO₂ max by Running 12 minutes: 41.4 ± 5.1 ml/kg/min.

The results of t-test, the test of different result of measuring VO₂max by treadmill compared with Ergo cycle: $P = 0.000$, the test of different result of measuring VO₂max by Treadmill compared with 12 minutes-Running: $P = 0.000$, the test of different result of measuring VO₂max by Ergo cycle compared with 12 minutes-Running: $P = 0.126$, indicate that there is no different for the VO₂max tests by Ergo cycle and 12 minutes-Running, whereas the VO₂max tests by Treadmill with Ergocycle and 12 minutes-Running showing the difference.